

UNIVERSITY OF CALICUT
Academic & Administrative Audit of Teaching Departments
(2016 -2021)
Report

Name of the Department		ZOOLOGY		
Sl. No.	Item	Grade A - Excellent, B - Good C - Average D - Poor	Comments	Suggestions for improvement
1	Programmes Offered		M.Sc. Applied Zoology: M.Phil. Zoology Ph.D. Zoology	All programmes are highly demanded
1	Relevance, adequacy, innovativeness etc. (3-8)	A	<ol style="list-style-type: none"> 1. All three programmes offered by the Department are much relevant and adequate as far as the employment opportunities are concerned. 2. No programme found discontinued. 3. Department offers flexibility for choosing the elective courses during third and fourth semester. But it is within the Department. No course conducted in collaboration with other Department/Institutions. 	<ol style="list-style-type: none"> 1. Interdisciplinary programmes may be offered at interdepartmental level. 2. . Offering open elective courses to the students of the other department would be appreciated. 3. As it is a well-established department long year back (in 1968), ample scope is there to conduct 4. programmes/courses in collaboration with other universities or institutions or industry
2	Demand ratio of courses (33,35,36)	A	For M.Sc.: 30.59 For M.Phil : 9.54 For Ph.D: 15.84	

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3	Syllabus & curriculum (10,11, 46)	A	<ol style="list-style-type: none"> 1. As per the data provided, the department offers outcome-based Education 2. Faculty take initiative in curriculum development process. 3. The curriculum is suitable to make students globally competitive in the subject. 	<ol style="list-style-type: none"> 1. Timely revision of Syllabus and curriculum may be highlighted. 2. The syllabus projected with programme outcome, course outcome and course specific outcome will be appreciated. 3. Syllabus would be appreciated if its revision is in tune with the feedback from Students/Teachers/Employers,/ Alumni / Parents 4. Open elective courses may be considered and the elective courses taken by the students for the last five years may be incorporated. 5. Introducing Value added courses imparting. transferable and life skills would be appreciated. 6. Courses having focus on employability/ entrepreneurship/ skill development may be emphasized 7. New courses introduced during the last five years may be emphasized 8. Including potential employer, Alumni and students as members in the Board of studies will be appreciated. 9. Consideration of Gender equity, human values and professional ethics, environment may be projected.
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	Examination & Results 4 (9, 34, 37)		<ol style="list-style-type: none"> 1. Follows Choice Based Credit Semester System for M.Sc. Programme 2. Pass % -100 throughout the period . 3. Grade was not mentioned in the data. 4. M.Phil. degree awarded: 21 5. Ph.D. degree awarded: 15 6. 86 % M.Phil./Ph.D. awarded students are females. 	Data on the timely conduct of Examination and Result publication may be highlighted.
II	Faculty			
	Strength 1 (12, 14, 15)	A	Sanctioned: 14; Filled: 11; Filled under CAS No visiting fellows/Teachers, Adjunct and Emeritus Professor No temporary or visiting faculty.	Appointing at least one Honorary / Emeritus Professor Professor/chair having vast academic experience will add the strength of the Department
	Student teacher ratio 2 (16)	A	M.Sc. Applied Zoology: 5:2 M.Phil Zoology: 1:1 Ph.D: 6:1	
	Qualification, experience diversity, performance etc. 3 (13, 41, 48)	A	Qualification: M.Sc. Ph.D Diversity: Professor-3; Associate Professor:5 Assistant Professor: 4 (3 newly appointed) Faculty from the same university: 50%	Faculty profile is good

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			<p>Faculty from other University within the state: 50%</p> <p>No faculty from other states: NIL</p> <p>Teacher performance according to student feedback: Very good: 5 Good: 6</p> <p>Suggestions from the students on the infrastructural facilities and for the improvement of facilities were received by the Department with positive spirit and actions were taken.</p> <p>Teachers used to submit self-Appraisal reports to the university</p> <p>h index (Scopus, Web of Science) of one faculty is exceptionally high (>10).</p>	
	<p>Participation of faculty in Professional development programmes, Seminars, Workshops etc.</p> <p>4 (26-27)</p>	B	<p>Out of 11, Five faculty participated as Resource person for the invited talks of various programmes at university/state/National/international levels. But number is only 8 for the last five years.</p> <p>Four faculty participated refresher course/workshop/hands-on training at state/national and international level.</p> <p>Total No of courses attended : 9</p>	<p>Participation/Contribution of faculty for more need based professional/Academic programmes would be appreciated.</p>
	<p>Recognitions received by faculty from notable institutions (state, national or international)</p> <p>5 (28-30)</p>	B	<p>Four faculty participated various academic activities as members of the committee at university. State/national/international level</p> <p>Two faculty served as Editor/Associate Editor in the reputed journals</p>	<p>Most of the faculties are Academically/professionally eligible to receive the recognitions (for eg. Fellowships, Grants/ Visiting professorships etc) at national/international levels</p>
III	Research			

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1	Thrust area (18)	A	Diverse Research areas relevant to both Academic as well as applied levels.	As a department engaged in diverse areas of research, there is an ample scope to explore more funding from national/international agencies to expand the research infrastructural facility further.
2	Facilities (21, 22)	Data not provided for evaluation	21: suggested to check the response: NIL shown in the data Not clear. Please verify the data provided from the department side.	As per the data provided, Dept has received funding (UGC SAP/CAS) for improving infrastructural facility. Museum/Animal house facility may be projected.
3	Publications (23)	A	Citation and h. index of six faculty found missing. Better to specify, the citations are Scopus or Web of science or others Total number of publication: 260 (Really appreciable) Average impact factor: Impact factor of only four faculty has shown in the data.	Research level progress of the Department is immensely good as evidenced from the publications and its citations and impact factor. The range of given impact factor is 1.00 - 9.18. Details of Technology transfer/lab to land programmes may be projected International visits by faculty/scholars may be projected
4	Patents (24)	C	One patent filed	Since the department research output is so good, Industry collaboration may help the department for patent filing.
5	Consultancy (25)	D	No Consultancy service	As the Department specializes in Applied Zoology, and other applied level research areas, the establishment of a consultancy service to generate revenue would be appreciated.
6	Projects (19)	A	Total 17 external funded projects to the faculty (State level: 5; National level; 11; International: 01 Total grant: Rs.: 3.72 crores	Since the faculty are specialized in diverse field, the collaborative research at interdisciplinary level is possible to a great extent for attracting more fund from various agencies at national/international level. Possibility to establish a centre of Excellence in an area in which most of the faculty are

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				<p>focusing and offer the training programme or research skill development programme to the students</p> <p>Linkages with Institutes/Industry for research/ Faculty/student exchange/ internship/project work may be emphasized.</p>
7	External Funding (all funds secured by faculty other than normal grants received by the University) (20)	A	UGC-SAP/CAS funding (worth Rs.94.66 lakh) for infrastructural Development.	<p>A most Eligible Department to get funding from DST-FIST/ DST-PURSE programme.</p> <p>The infrastructure developed through research projects and Extramural grants may be listed.</p>
IV	Students			
1	Student achievements (state, national, international) (31)	A	Two students got best paper present award and six students Department/University endowment. Of the 35 research scholars, 21 students are with national level fellowship, 3 students with state fellowship, 7 with university fellowships and 3 with E-grants. Two PDFs	The students may explore the Opportunities for funding for national/international internship/paper presentations/short term training programmes under different fellowship programme offered by the govt/non govt agencies. This will be appreciated.
2	Diversity (male female ratio, from within the state, outside the state and international) (33, 38)	B	MSc. Male female ratio – 1: 7 >95 % from the same University < 5 % from the universities within the state < 1% from the universities outside the state	<p>Percentage of rural students may be projected.</p> <p>% of seats filled against reservation category may be projected</p>
3	Student Progression (39, 40, 49)	C	21 students out of 110 (20%) cleared SET/GATE/UGC-CSIR- JRF-NET/UGC-CSIR NET)	<p>Department can initiate Competitive Exams (NET, GATE etc)/ Career guidance programmes with the collaboration of other Departments</p> <p>Programmes on Placement and higher Education may be considered.</p>

				<p>Awareness programmes for various fellowships/grants for the students may be initiated/projected.</p> <p>Establishment of Mentor-Mentee system</p> <p>Student progression to higher studies, students who qualified in competitive examinations and placement of outgoing students may be highlighted.</p> <p>Extension activities and institutional social responsibilities with the involvement of students may be highlighted.</p> <p>Alumni activities may be highlighted.</p>
	Financial support to Students 4 (45)	Data not completed	Only M.Sc. 2019 and 2020 are given. Out of 44 students (in 2019, 2020 admission), 25 students got financial assistance.	Students from each programme receiving financial assistance may be projected year wise/category wise/ source wise
V	Support Staff (Strength, Adequacy etc.)	Data not provided		
VI	Teaching- learning & Evaluation (47)	A	<p>All 11 Teachers take part to facilitate effective learning as they prepare and follow the Academic Teaching plan, employed the Interactive and participatory approaches with technology support.</p> <p>As evidenced from the information, teachers provide a variety of learning experiences, creating a feeling of responsibility in students and make learning a process of construction of knowledge.</p>	<p>Report on Mentor system for academic and other related issues may be projected.</p> <p>Visit of the distinguished nationally/internationally acclaimed experts in the department may be highlighted.</p> <p>Departmental committee/faculty meeting may be highlighted.</p> <p>E. content preparation for P.G and Graduate students (for MOOC, SWAYAM, PARTHASHALA etc) may be projected</p>
VII	Feedback Mechanism (48)	B	Teachers performance is good .	Details of structured feed back system may be given.
VIII	Activities of the Department (conduct of seminar, workshops,	A	19 programmes including, 7-14 days workshops, lectures, conferences and seminars, orientation camps, extension activities for school students and other student enrichment programme were conducted . The	Programmes on Placement and higher Education may be considered.

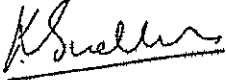
	student enrichment programmes, extension activities and other beyond scholarly activities) (32, 50, 55)		programme with the participation of Nobel laureate and activities related to organic farming deserve appreciation	Department can initiate Competitive Exams (NET, GATE etc)/ Career guidance programmes with the collaboration of other Departments. Awareness programmes for various fellowships/grants for the students may be initiated/projected. Implementation of Facility/programmes/Measures to promote the slow learners will be appreciated. Department level grievance cell/committee for the students will be appreciated.
IX	Infrastructural facilities of the Department (52)	Data not sufficient to assess	Advanced mathematical shape analysis and macrophotography.	Sharing the facility to other department or institutions may be projected.
X	Uniqueness of the Department & Innovative practices (53-55)	B	Research in Biomolecules and its application Department has initiated the work on Bio adhesives to apply in medical and industrial field. Detailed data or information not given. The suggested grade needs to be verified.	1) To be highlighted with more details 2) Best practices unique to the Department if any, may also be highlighted
XI	SWOC (56)		SWOC was well understood as far as Research is concerned. No mentioning about the offered programmes or courses.	
1	Strength	B	Cutting edge technology and application of various bio-adhesives and biomolecules Advanced shape analysis and environment stress monitoring. Department offer the highly demanded programmes and courses Demand ratio of each programme is high. Teachers are highly qualified with handling many research projects, publishing papers in impact factored journals. h-index of some teachers are exceptionally high.	May be more strengthened (Please see the suggestions in the column Opportunities.
2	Weakness		Industrial collaboration	Possibility for industrial collaboration is much.

			Biomolecule application in industry and Agriculture	<ol style="list-style-type: none"> 1. Establishing the industrial collaboration 2. Increase the student diversity from other universities in the state 3. International collaboration/visits may be more strengthened. 4. Establishing a Zoology Museum 5. Best practices unique to the Department may be highlighted. 6. MoU may be initiated
3	Opportunity			
4	Challenges		Field trail and application	
XII	Future plans (57)		<ol style="list-style-type: none"> 1. Screening and characterization of the Biomolecules. 2. Sustainable development of industrial and pharmaceutical potential 	Future plan may be more elaborated.

Overall remarks of the Auditor :

- I. The programmes offered by the department: is relevant as evidenced from the demand ratio of each programme. Timely revision of syllabus and curriculum of the programme may be done by considering 1). Programme output, course output and course specific output 2) highlighting new courses introduced during each revision during the assessment period 2) highlighting the courses focussing on Employability/entrepreneurship/skill development 4) introducing Open elective courses. Offering "Value added courses" to the university level would also be appreciated.
- II. Faculty and Research: Qualification, diversity, performance and potential as researcher are up to the mark as evidenced from the faculty profile provided. Most of the faculties are eligible to get national/international recognitions like fellowships, membership/collaborative research projects as evidenced from their publications in the Scopus/Web of Science indexed journals, citation, h-index and the research projects currently handling or completed. Since the focused research in the department is having many applications in diverse field, establishing industrial collaborations and consultancy services may be given thrust in the future plan of the Department. Though one patent filing done from the department, more patent generation is possible.

- III. Student Progression: More initiative to enhance the opportunity for getting research fellowships/higher education/placement to the outgoing students may be taken. Data on placement and higher education of outgoing students need to be highlighted. Alumni activities and their contribution need to be emphasised.
- IV. Infrastructural facility: Need to be more highlighted. Zoological Museum needs to be projected.
- V. Uniqueness and innovative aspects of the Department need to more projected; Best practices followed by the department need to be highlighted.
- VI. Strength of the Department: Well established Department offering highly demanded programmes, highly qualified faculty and their performance as teacher and researcher would be appreciated.
- VII. Weakness: Lack of collaboration with Industry/other institution at national/international institutes/ establishment of MoU
- VIII. Challenges: Challenges for field trail and application of the research out of the Department as mentioned in the provided data need to be overcome
- IX. Opportunity: As a well established department, its visibility needs to be increased to attract the students/researchers of other university/ states. Opportunities are there to attract the overseas students for internship/Ph.D programmes.
- X. Future plans: Department may elaborate the future plan with more details.

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